REMARKS/ARGUMENTS

Claim 35 has been canceled. Claims 18-21 and 24-34 and new Claims 36 to 38 are active in the case. Reconsideration is respectfully requested.

Applicants' representative wishes to thank Examiner Vargot for the helpful and courteous interview of February 2, 2006. As a result of the discussion, it is believed that the issues in the case have been clarified and that the prosecution of the application has been materially advanced.

The present invention relates to a method of producing light polarizing films.

Specification Amendments

The specification has been amended on page 2 to correct a minor spelling error. Entry of the amendment is respectfully requested.

Claim Amendments

Support for new Claims 36 and 37 can be found in Claim 18 and on Example 1 on page 19 of the text. Support for the term "unstretched" in Claim 38 can be found at page 5, lines 6-8 and 21-24 where the text makes it clear that the starting PVA is an unstretched film that is stored on a roll, and in Example 1, lines 1-3 where a roll of starting unstretched PVA film is discussed having a degree of hydrolysis of 99.95 mol %. Entry of the new claims into the record is respectfully requested.

Claim Rejection, 35 USC 112

The issue that has been raised with respect to Claim 35 is believed to have been resolved by the cancellation of the claim from the application. Withdrawal of the rejection is respectfully requested.

Prior Art Rejection

Claims 18-21 and 24-35 stand rejected based on 35 USC 103(a) as obvious over Racich et al, U. S. Patent 4,591,512 in view of Sanefuji et al, U. S. Patent Publication 2002/0001700. This ground of rejection is respectfully traversed.

The method of the invention of continuously producing a monoaxially stretched PVA film is characterized by the following five aspects:

(1) the starting PVA film has a width of at least 2 m;

(2) the PVA film is stretched in an aqueous boric acid solution;

(3) the draw ratio of the PVA film in the bath is at least a factor of 5 times;

(4) $A \geq 5$ (m); and

(5) $A/B \geq 0.5$ (min).

An issue that was discussed during the interview is the matter of the significance of the width of the PVA film that is stretched in the present process. It is, in fact, essential that the starting unrolled film have a width of at least 2 meters. If the width of the film is less than 2 meters, then, in the stretching process, the film will significantly neck toward the center of the film as it is stretched. This is as stated at the bottom of page 14 of the specification. This parameter is not trivial. The fact that the Racich et al patent starts with a film having a width of 533 mm, therefore, it not insignificant, besides the fact that the starting film of the reference is initially stretched under dry conditions and not in a borate salt bath, as disclosed at column 2, lines 26-43 of the patent. As stated, an initial dry stretching of a PVA film is accomplished as taught by the patent in column 2. The film is stretched longitudinally by a factor of 2.5 to 4 times its normal dimension, preferably 3.6 times. The thickness of the film is reduced, in the specific instance disclosed, from 0.046 mm to 0.025 mm and the width of the film is reduced, again, in the specific instance disclosed from an initial width of 940 mm

down to about 533 mm. On the other hand, no such dry stretching of a PVA film is featured in the claim embodiments of the present process. In other words, none of the five features (1)-(5) of the present process noted above are taught in column 2 of the Racich et al patent, and the portion of Example 18 that corresponds to this section of column 2 of the patent.

Applicants maintain that the Examiner misinterprets the discussion of the stretching of the film of the Racich et al patent as to its teaching of stretching of the PVA film in order to render the stretching taught by the patent as close as possible to the stretching that occurs in the present process. As noted above, the patent in column 2 teaches a dry stretching step that stretches the film longitudinally by a factor of 2.5 to 4 times, preferably 3.6 times and results in a film that is 533 meters wide. However, the width of the film actually sent to the borate bath for treatment and further stretching is only 0.254 meters and, as such, is a length of film cut-out of or excised from the film of a stretched width of 533 mm. Patentees do this for the specific reason that in order to obtain a product polarizer film of highest efficiency, a strip is taken from the center portion of the film which has the highest uniformity of orientation. On the other hand, the Examiner dismisses the width of the strip of PVA selected as a mere matter of width desired in a final polarizer. This conclusion by the Examiner is not correct, because it is clear that the final width of the film is determined by the process requirements and a the specific need for a PVA film of good uniformity.

The reference in the paragraph bridging columns 3 and 4, in teaching a stretching in a borate bath, discloses that the PVA film is stretched in total by a factor of about 5 to 5½ (column 4, lines 8-11). This means that since the PVA film is initially dry stretched by a factor of 3.6 times (column 2, lines 36-38; column 3, lines 61-64), the extent to which the film is stretched in the borate bath is only about 2 to about 2½ times. (The patent at column 3, lines 57-61 teaches a stretching of about 30 % to about 100 % of its dimensions in the borating solution.) This limited stretching in the borate bath is corroborated by the teaching

at column 4, lines 23-29 that the PVA film enters the borate bath at a speed of about 0.3 m/min and leaves the bath at a slightly higher speed of 0.42 m/min. In other words, in terms of factor A of the present claims a film speed at entry of the film into the bath of 0.3 m/min at a time of 3.4 min gives an A value of 1.02 meters, and a film speed at exit of the film from the bath of 0.42 m/min at 3.4 min gives an A value of 1.43 meters. (The process features of Example 1 at column 5, lines 17-27 of the patent are consistent with the teachings at the bottom of column 4 of the patent.) This limited secondary stretching is quite distinct from the requirement of the present claims of a one time stretching (or draw) in a borate bath by a factor of at least 5. The one-time stretching of the present process in the borate bath by a factor of at least 5 is achieved by the specific conditions set forth in Claim 18 of the distance (A) over which the film is stretched of at least 5 meters while the speed (B) of the film exiting the bath is at least 10 m/min. Clearly, in its teaching of the borate bath, the patent does not mention or suggest features (3) and (4) of the present claims. It also does not show or suggest features (1) and (5) of the present process. Accordingly, the cited Racich et al patent does not show or suggest the present invention.

The disclosure of Sanefuji et al is believed to be of secondary importance. The reference describes the preparation of a PVA film by use of a casting drum. The product film has a thickness within the range of 20 to 150 μm and a width of at least 2 m [0027]. The patent in paragraph [0030] teaches the use of a film having a width of at least 2 m in monoaxial stretching, not only in wet stretching operations, but also dry stretching operations. However, just as in the case of the Racich et al patent, there is no teaching or suggestion of the specific limitations of the present claims therein. That is, the reference gives no teaching or suggestion of a draw ratio upon stretching, a stretching distance (A), a stretched film speed (B) and a ratio of stretching distance to stretched film speed (A/B), as these factors pertain to a monoaxial stretching in a borated salt bath. Accordingly, the present

invention is clearly patentably distinguished over the combined prior art and withdrawal of the obviousness ground of rejection is respectfully requested.

New Claim 38 is especially believed to be distinguished over the combined prior art, because the claim clearly requires that the PVA film, that is passed into the borate bath in which it is stretched, is an unstretched PVA film. This feature of present Claim 18 clearly excludes the initial and necessary dry stretching of PVA that is taught by Racich et al from the presently claimed process.

It is believed that the application is in condition for allowance. Early notice to this effect is earnestly solicited.

Respectfully submitted,

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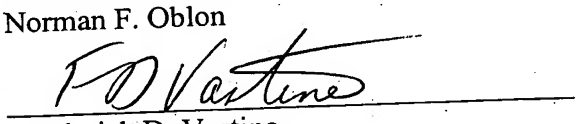

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